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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/811,421

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EXAMINER

HAILU, TESHOME

ART UNIT

PAPER NUMBER

2139

NOTIFICATION DATE

DELIVERY MODE

05/28/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/811,421	<b>Applicant(s)</b> ISHIGUCHI, FUSAO	
	<b>Examiner</b> TESHOME HAILU	<b>Art Unit</b> 2139	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This office action is in reply to an amendment filed on February 25, 2008. Claims 1-8 have been amended.
2. Claims 1-8 are pending.

### *Response to Amendment*

3. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.
4. Applicant's arguments filed on February 25, 2008 with respect to objection of the specification have been fully considered in view of the amendment and are persuasive. The objection of specification has been withdrawn.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:  
  
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
2. Claims 1, 5 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to mention or teach that ***the key data can be modified by a key data writing equipment***.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doiron et al (US 5,481,610) in view of Nakano (US Pub. No. 2003/0182565).

As per claim 1 Doiron discloses:

A digital video disc device, comprising: a memory in which key data associated with information on a digital video disc is recorded in advance; (abstract, line 1-6, a digital radio has standardized "key" storage for several different cryptosystems (DES, VGE, VGS, etc.). Cryptographic keys are stored in a table in non-volatile memory such as EEPROM). Also see fig. 2.

Wherein random data is written around said key data in said memory, (column 4, line 18-37, a digital radio has standardized "key" storage for several different cryptosystems (DES, VGE, VGS, etc.). Cryptographic keys are stored in a table in non-volatile memory such as EEPROM. As a result, the stored key itself looks like the stored random data and it would be hard for an attacker to identify the cryptographic keys from the random data). Also see the table in fig.3

Means for processing the information on said digital video disc using said key data read from said memory; (column 1, line 5-13, the invention relates to radio frequency (RF) communications systems, and more particularly to digital radios having a "secure" mode that encrypts and decrypts messages. Still more particularly, the present invention relates to techniques for securely loading and storing cryptographic key information within a mobile or portable radio transceiver).

Doiron does not explicitly disclose, the information on a digital video disk. However, in the same field of endeavor, Nakano teaches this limitation as, (page , paragraph 7, the DVD right protection system each DVD reproduction terminal for reproducing digital content recorded on a distributed DVD pre-stores a master key. The master key is determined by the manufacturer of the particular reproduction terminal. The reproduction terminal, which uses this master key in the decryption process, has a function of ultimately decrypting and reproducing the digital content recorded on the DVD).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention was made, to modify the teaching of Doiron and include the information on a digital video disk using the teaching of Nakano in order to substitute one method for the other to achieve the predictable result of securing information in electronic media using the key data stored in memory.

The key data can be modified by a key data writing equipment. (Column 10, line 60-65, as cryptographic keys are loaded into the bank 86, the bit-mask byte 90 is updated to indicate which keys within the bank are valid).

Doiron does not explicitly disclose that the key data can be modified by key data writing equipment. However, in the same field of endeavor, Nakano teaches this limitation as, (page, paragraph 113, the key setting system 104 has a key information storage unit 301, a key information generation unit 302, an invalid terminal designation unit 303, a key information updating unit 304, a decryption key determining unit 305, and an encryption key designation unit 306). Both the key information generation unit (writing equipment) and key information updating unit (modifying) are a part of key setting system (see fig. 3 of Nakano).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention was made, to modify the teaching of Doiron and include the limitation, "the key data can be modified by key data writing equipment", using the teaching of Nakano in order to make the key information valid by updating (modifying) with right and most up-to-date information (see paragraph 117 of Nakano).

As per claim 2 Doiron in view of Nakano discloses:

The equipment for a digital video disc according to claim 1, wherein said key data is an encryption key for equipment for encrypting and recording the information on said digital video disc. (Column 8, line 1-33, the EEPROM 76 that stores a key table 78 containing cryptographic keys to be used for encrypting and decrypting purpose by encryptor/decryptor 74).

As per claims 3 in view of Nakano discloses:

The equipment for a digital video disc according to claim 2, wherein said key data is a decryption key for equipment for decrypting the information read from said digital video disc. (Column 8, line 1-33, the EEPROM 76 that stores a key table 78 containing cryptographic keys to be used for encrypting and decrypting purpose by encryptor/decryptor 74).

Claim 4 is rejected under the same reason set forth in rejection of claim 3:

As per claims 5 Doiron discloses:

A method of recording in advance prescribed information to be protected against unauthorized access in a memory, comprising the steps of: (column 9, line 33- 52, a random data block 88a separates data values 82, 84; random data blocks 88b, 88c, 88d separate value 84 from the cryptographic key block 86; and a random data block 88e is stored after cryptographic key block 86 within table 78. In the preferred embodiment, it is very difficult for an attacker to tell the random data 88 from the "meaningful" data 82, 84, 86--and therefore the random data in some sense "hides" or "shrouds" the meaningful data to make it difficult for the attacker to extract the meaningful data). Also see the memory table on fig. 3.

Writing said prescribed information in an unused area of said memory; (abstract, line 1-6, a digital radio has standardized "key" storage for several different cryptosystems (DES, VGE, VGS, etc.). Cryptographic keys are stored in a table in non-volatile memory such as EEPROM). According to Doiron, the cryptographic keys (prescribed information) are stored in non-volatile memory such as EEPROM).

Writing random data in an area within said unused area adjacent to said prescribed information written in said step of writing. (Column 4, line 18-37, a digital radio has standardized "key" storage for

several different cryptosystems (DES, VGE, VGS, etc.). Cryptographic keys are stored in a table in non-volatile memory such as EEPROM. As a result, the stored key itself looks like the stored random data and it would be hard for an attacker to identify the cryptographic keys from the random data). Also see random data 88d, 88e and cryptographic key stored in memory table (fig.3).

Claim 8 is rejected under the same reason set forth in rejection of claim 5:

As per claim 6 Doiron in view of Nakano discloses:

The method of recording prescribed information according to claim 5, wherein said memory is mounted on equipment for a digital video disc, (see the EEPROM on fig. 2).

Said prescribed information is key data associated with information on a digital video disc. (Column 9, line 33-52, "meaningful" data stored within table 78 includes a first byte random value 82, a kth byte random value 84, and at least one (and typically many) cryptographic keys stored in key banks residing within a cryptographic key block 86).

As per claim 7 Doiron in view of Nakano discloses:

The method of recording prescribed information according to claim 5, wherein said prescribed information is a password. (Column 8, line 1-33, the EEPROM 76 that stores a key table 78 containing cryptographic keys to be used for encrypting and decrypting purpose by encryptor/decryptor 74).

### ***Conclusion***

7. The prior art made or record and not relied upon is considered pertinent to applicant's disclosure.  
TITLE: Reception terminal, key management apparatus, and key updating method for public key cryptosystem, US 7,206,412.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TESHOME HAILU whose telephone number is (571)270-3159. The examiner can normally be reached on Mon-Fri 7:30a.m. to 5:00p.m. PST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Teshome Hailu  
May 19, 2008

/Kristine Kincaid/  
Supervisory Patent Examiner, Art Unit  
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